



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,395	07/19/2001	Wail M. Refai	4015-978	9897
24112	7590	03/22/2005	EXAMINER	
COATS & BENNETT, PLLC P O BOX 5 RALEIGH, NC 27602			CHOU, ALBERT T	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/909,395

Applicant(s)

REFAI ET AL.

Examiner

Albert T. Chou

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 1-5 is/are allowed.
6) ☒ Claim(s) 6 and 8-16 is/are rejected.
7) ☒ Claim(s) 7 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 19 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

- Claim 6, line 9, states "*initially uplinking information on a first and a second control channel, during said group call*". The term is not clear to the examiner since there is no definition or description pertinent to a first and a second control channel found in the specification.
- Claim 7, line 16, states "*said second control channel*". The term is not clear to the examiner since there is no definition or description pertinent to the second control channel found in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 6, 8-15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Grube et al. (US Patent Number: 6,005,848), hereinafter referred to as Grube.

Regarding claim 6, Grube teaches a wireless CDMA communication system 100 with a plurality of subscriber units arranged into at least one talkgroup (Figure 1, col. 2, lines 34-35; A method of handling a group call in a CDMA wireless communications system), comprising

- A talkgroup 101 which further comprising a sub-group 102 (Figure 1, col. 2, lines 38-39; classifying members of a group call into a first class or a second class). The subscriber units 104-106 are included in the talkgroup 101 and the subgroup 102 (Col. 2, lines 40-41; said first class) and are allowed to engage in duplex communications (Figure 1; col. 2, lines 46-48; said first class comprising members authorized to both talk and listen) relative to the talkgroup 101. The subscriber units 107-109 are included in the talkgroup 101 only (Figure 1; col. 2, lines 41-48; said second class comprising members authorized to listen but not to talk).
- Grube teaches an outbound code is used to provide outbound communication channels 120-122 (private downlink channels) to each subscriber unit 104-106 (member belonging to said first class) in the subgroup 102 (Figure 1; col. 2, lines 52-54; assigning a private downlink channel to at least one member of said group call belonging to said first class).
- Grube teaches an outbound code is used to provide outbound communication channels 117-119 (public downlink channels) to each subscriber unit 107-109 (member belonging to said second class) in the talkgroup 101 (Figure 1; col.

2, lines 52-54; assigning a public downlink channel to at least one member of said group call belonging to said second class).

- Grube teaches the data in the duplex sub-group entries 303 can be entered by a system manager, or it can be automatically entered as a dynamic function of various events (Figure 3; col. 3, lines 62-64). One manner of carrying out dynamic updates of the subgroup entries 303 (Figure 3; col. 3, lines 65-67; initially uplinking information on a first and a second control channel by a first member of said group call belonging to said first class) is to continuously store identities of subscriber units that have recently engaged in communications with the requesting subscriber unit (Figure 3; col. 3, lines 65-67).
- Grube discloses a various technique may be employed to detect the end of talkgroup call (Col. 5, lines 40-41). For example, a timeout timer may be used after units have ceased transmitting either idle patterns or voice information (Col. 5, lines 41-43; in response to said first member not talking for a predetermined time period during said group call). If the subgroup call has ended (said member not talking), the fixed infrastructure 103 de-assigns the outbound codes and inbound codes (Col. 5, lines 45-47; ceasing the uplinking information on said first control channel, during said group call, by a first member).

Regarding claim 8, Grube teaches that if there are no requests to talk have been received at step 214, the fixed infrastructure 103 determines at step 218 whether the talkgroup call has ended (Figure 2; col. 5, lines 37-40). A time out timer may be used after all units have ceased transmitting either idle patterns or voice information (Col. 5, lines 41-43; ending group call when all of said members are silent for a length of time greater than a predetermined threshold).

Regarding claim 9, Grube teaches the controller 111, often referred to as a Base Station Controller or BSC, and the BTSs 112-113 comprise processing and communicate with subscriber units via communication channels 117-119 (Figure 1; public downlink channels) and 120-122 (Figure 1; private downlink channels) concurrently (Figure 1; col. 2, line 47; col. 3, lines 1-6; comprising processing, at said base station both private and public downlink channels concurrently).

Regarding claim 10, Grube teaches a subscriber unit that is a member of the talkgroup 101 (Col. 6, lines 45-46; members of said second class), but not a member of the sub-group 102 (Col. 6, lines 45-46; members of said first class), may transmit a request to talk to fixed infrastructure 103 in order to participate in the talkgroup call (Col. 6, lines 44-47; allowing said second class to move to said first class). After transmitting the request to talk to the fixed infrastructure 103 at step 508, the subscriber unit subsequently receives an assignment of an additional inbound code for use in the talkgroup call, at step 510 (Figure 5; col. 6, lines 60-64; assigning such moving members a private downlink channel on which to communicate).

Art Unit: 2662

Regarding claim 11, Grube teaches a wireless CDMA communication system 100 with a plurality of subscriber units arranged into at least one talkgroup (Figure 1, col. 2, lines 34-35; A method of handling a group call in a CDMA wireless communications system), comprising

- A talkgroup 101 which further comprising a sub-group 102 (Figure 1, col. 2, lines 38-39; classifying members of a group call into a first class or a second class). The subscriber units 104-106 are included in the talkgroup 101 and the subgroup 102 (Col. 2, lines 40-41; said first class) and are allowed to engage in duplex communications (Figure 1; col. 2, lines 46-48; said first class comprising members authorized to both talk and listen). The subscriber units 107-109 are included in the talkgroup 101, but not belonging in subgroup 102. Only those subscriber units included in the sub-group are logically allowed to engage in duplex communications (Figure 1; col. 2, lines 41-48; said second class comprising members authorized to listen but not to talk).
- Grube teaches an outbound code and an inbound code are used to provide outbound communication channels 120-122 (private downlink channels) and inbound communication channels 123-125 (private uplink channels) to each subscriber unit 104-106 respectively (member belonging to said first class) in the subgroup 102 (Figure 1; col. 2, lines 52-54; assigning a private downlink channel and a private uplink channel to a first member belonging to said first class).

- Grube teaches an outbound code is used to provide outbound communication channels 117-119 (public downlink channels) to each subscriber unit 107-109 in the talkgroup 101 (Figure 1; col. 2, lines 52-54; assigning the remaining members of said group call to one or more public downlink channels).
- Grube teaches a detection that all subscriber units in the subgroup 102 (Col. 5, lines 43-45; said first member) have dekeyed could be used (Col. 5, lines 45-47; reassigning said first member). If the subgroup call has ended (for example, stop talking), the fixed infrastructure 103 de-assigns the outbound codes and inbound codes (Col. 5, lines 45-47; reassigning said first member to said public downlink channel). Grube discloses different codes are used to provide each communications channel in the talkgroup 101 (second class members) and subgroup 102 (first class members). It is inherent in Grube that a re-assignment of outbound code to a member of subgroup 102 (a first member of said group call belonging to said first class) also incurs the change of the group classification to that member from the subgroup 102 to talkgroup 101 (reclassifying said first member to said second class), which each member can only listen but not talk.
- Grube further teaches a member of talkgroup 101, for example subscriber unit 109, may transmit a request to talk in order to participate in the talkgroup call (both talk and listen) (Col. 6, lines 44-46). The subscriber unit (said second member) subsequently receives, from the infrastructure 103, an assignment of an additional inbound code (Col. 6, lines 60-64; reassigning

said private downlink channel and said private uplink channel to said second member) for use in the talkgroup call so that that subscriber will be able to listen and to talk (Figure 1; col. 6, lines 60-64; figure 5, steps 510-512; reclassifying a second member of belonging to said second class to said first class).

Regarding claim 12, Grube teaches a method of facilitating communication (Figure 1; col. 2, lines 32-34) comprising:

- A plurality of subscriber units 104-109; establishing a group of users in a CDMA wireless communication system), each of the subscriber units 104-109, a mobile station, has a set of the control and processing element 401, which is coupled to a transmitter 403, receiver 404, speaker 405, microphone 406 and input device 407 (Figures 1 & 4; col. 5, lines 61-67; each of said users having a mobile terminal);
- Receiving an inbound talkgroup call request from one of subscriber units 104-109 (Figure 2; step 202; initiating a call to at least one other user of the group from a first mobile terminal);
- Determining an outbound code for use with the subscriber units 104-109 in talkgroup 101 (Figure 2, step 204; assigning a first private channel to said first mobile terminal);
- Assigning one inbound code for the inbound channel, for example 123, (a private channel) for use with the subscriber unit, for example 104, (said first

mobile terminal), in subgroup 102 (Figure 2, steps 204-208; assigning a first private channel to said first mobile terminal);

- Assigning inbound codes for other inbound channels, for example 124-125, (other private channels) for use with other subscriber units, for example 105-106, (mobile terminals), in subgroup 102 (Figure 2, steps 204-208; mobile terminals associated with said at least one other user of the group); and
- Assigning an outbound code for the outbound channel, for example 117 (a public channel) for use with subscriber unit, for example 107, in talkgroup 101 (Figure 2, steps 204-208; assigning a public channel to remaining users of the group).

Regarding claim 13, Grube discloses a various technique may be employed to detect the end of talkgroup call (Col. 5, lines 40-41). For example, a timeout timer may be used after units have ceased transmitting either idle patterns or voice information (Col. 5, lines 41-43; timing out users). If the subgroup call has ended (said member not talking), the fixed infrastructure 103 de-assigns the inbound codes (Col. 5, lines 45-47; private channels are freed for other users within the group).

Regarding claim 14, Grube teaches a subscriber unit (a mobile terminal) that is a member of the talkgroup 101, but not a member of the sub-group 102 (Col. 6, lines 45-46; inactive users associated with the public channel), may transmit a request (upon actuation of a command) to talk to fixed infrastructure 103 in order to participate in the talkgroup call (Col. 6, lines 44-47). After transmitting the request to talk to the fixed

Art Unit: 2662

infrastructure 103 at step 508, the subscriber unit subsequently receives an assignment of an additional inbound code for use in the talkgroup call, at step 510 (Figure 5; col. 6, lines 60-64; to secure a private channel upon actuation of a command on their mobile terminal).

Regarding claim 15, Grube teaches that data in the duplex subgroup entries 303 can be entered by a system manager, or it can be automatically entered as a dynamic function of various events (Figure 3; col. 3, lines 62-64). Grube also teaches that subscriber units that are not included in the subgroup are allowed to transmit voice information only after requesting and receiving an inbound code (Col. 2, lines 24-27; comprising limiting the other private channels to a predetermined number).

Regarding claim 16, Grube teaches a wireless CDMA communication system 100 with a plurality of subscriber units arranged into at least one talkgroup (Figure 1, col. 2, lines 34-35; A method of handling a group call in a CDMA wireless communications system), comprising

- A talkgroup 101 which further comprising a sub-group 102 (Figure 1, col. 2, lines 38-39; dividing members of a group call into a first class or a second class). The subscriber units 104-106 are included in the talkgroup 101 and the subgroup 102 (Col. 2, lines 40-41; said first class) and are allowed to engage in duplex communications (Figure 1; col. 2, lines 46-48; said first class comprising members authorized to both talk and listen) relative to the talkgroup 101. The subscriber units 107-109 are included in the talkgroup

101 only (Figure 1; col. 2, lines 41-48; said second class comprising members authorized to listen but not to talk).

- Grube teaches an outbound code is used to provide outbound communication channels 117-125 (public downlink channels) to each subscriber unit in the talkgroup 101 (Figure 1; col. 2, lines 52-54; assigning a public downlink channel without corresponding uplink channel to a member of said second class for receiving downlink communications from said base station).
- Additionally, inbound codes are used to provide inbound communication channels 123-125 (private uplink channels) to each subscriber unit in the sub-group 102 (Figure 1; col. 2, lines 55-58). The outbound/inbound channel pairs 120/123, 121/124 and 122/125 (a private downlink/uplink channel pair) are assigned to each subscriber unit in the sub-group 102 respectively (Figure 1; col. 2, lines 52-58; assigning a private downlink/uplink channel pair to a member of said first class for communicating between said member of said first class and a base station). During the group call, for example, subscriber units 104-106 in subgroup 102 (members of said first class) and subscriber units 107-109 in talkgroup 101 (members of said second class) will receive the communications messages from BTS 112/Controller 11 (Col. 2, lines 65-67; Base Station) over their outbound channels 120-122 and 117-119 respectively (Figure 1; col. 2, lines 52-54; receive downlink communications from said base station over their respective downlink channels).

Allowable Subject Matter

4. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. Claims 1-5 are allowed.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert T. Chou whose telephone number is 571-272-6045. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ac
Albert T. Chou
March 14, 2005

Chau Nguyen
CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600